What is claimed is:

1.

A pole means for holding a structure in an elevated position comprising:

a base means for insertion into the ground and including a lower section and an upper section;

a pole section means for mateable slip-fitting over at least a portion of the upper section of the base means and having a lower open end, an interior bore extending axially and inwardly from the lower open end, and having an inside diameter generally matching the inside diameter of the upper section of the base means; and

means for positioning the lower open end of the pole section means, when slip-fitted onto the base means, above the ground but generally near the ground.

2.

The pole means of claim 1 wherein the base means is made from concrete.

3.

The pole means of claim 2 wherein the base means is made from hollowed concrete.

4.

The pole means of claim 1 wherein the base means includes a cylindrically shaped lower portion.

5.

The pole means of claim 1 wherein the base means includes a frusto-conically shaped upper section.

6.

The pole means of claim 1 wherein the base means includes a tapered upper section and a lower section and the means for positioning comprises the tapered upper section of the base means and a generally matching tapered interior bore of the pole section means.

7.

The pole means of claim 1 wherein the upper section of the base means is tapered at 0.14 inches across the diameter of the base means per foot in height.

8.

The pole means of claim 1 wherein the upper section of the base means is always above ground.

9.

The pole means of claim 1 wherein the upper section of the base means has generally straight sided sidewalls, and the pole section means has a matching generally straight sided interior bore, the means for positioning including a stop member means positioned on said base means which limits the distance the pole section means can slip fit onto the base means.

10.

The pole means of claim 1 wherein width and length of the base means is related to required strength, height, and weight of the pole means and any structure attached to the pole means.

11.

The pole means of claim 1 wherein the pole section means is made from metal.

12.

The pole means of claim 11 wherein the pole section means is hollow.

13.

The pole means of claim 1 wherein the pole section means is tapered along its entire length.

14.

The pole means of claim 13 has an elongated frusto-conical shape.

15.

The pole means of claim 13 wherein the taper is approximately 0.14 inches in diameter per foot of length.

16.

The pole means of claim 1 wherein the interior bore is slightly larger than the outside diameter of the upper section of the base means.

17.

The pole means of claim 1 wherein the slip fit between the base means and a pole section means locks the pole section means in place by resilient and frictional locking.

18.

The pole means of claim 1 further comprising a plurality of pole section means, one pole section means being slip fitted over the upper section of the base means, additional pole section means slip fitting sequentially on preceding pole section means.

19.

The pole means for claim 1 wherein the pole section means is adapted to receive mounting means upon which can be connected the structure to be elevated.

20.

The pole means of claim 1 further comprising openings in the base means and pole section means to allow access to the interior of the base means and pole section means.

21.

A method of rigidly suspending a structure in an elevated position comprising the steps of:

forming a upper section in a base means which is to be mounted in the ground;

positioning the upper section above the ground when the base means is mounted in the ground;

forming in the bottom portion of a pole section a bore mateably slip fittable over the upper section of the base means; and

slip fitting the pole section to the base means so that the lower section of the pole section is above but generally near the ground.

22.

The method of claim 21 further comprising positioning a stop means on one of the base means and pole section for determining the distance upon which the pole section slip fits over the base section.

23.

The method of claim 21 wherein the bore slips unto the upper section of the base means to mount the pole section to the base means.

24.

The method of claim 21 wherein the upper section of the base means is tapered and the bore in the pole section is tapered to mateably match.

25.

The method of claim 21 wherein the base means is made of reinforced concrete.

26.

The method of claim 21 wherein the pole section is made of tubular metal.

27.

The method of claim 21 comprising the step of matching the diameters in lengths of the base means and pole section according to desired strength, height, and weight of the pole section and any structure attached to the pole section.

28.

The method of claim 21 further comprising positioning one or more additional pole sections each having a bore in a

bottom portion and a upper section sequentially to each preceding pole section.

29.

The method of claim 21 comprising the further step of slip fitting a first pole section to the base means, slip fitting any further pole section to a preceding pole section to preassemble one or more pole sections and the base means:
grasping the preassembled combination at approximately at or above the center of the gravity;
moving the base means into a previously excavated hole in the ground;
bringing the preassembled combination to a generally upright position;
adjusting the preassembled combination to plumb the preassembled combination; and
filling the excavated hole to secure the preassembled combination in the plumb position.

30.

The method of claim 21 further comprising the steps of:
moving the base means to a pre-excavated hole in the ground;
adjusting the base means so that it is generally plumb;
filling the remaining areas of the excavated hole to secure the base means in the hole; and
slip fitting a first pole section to the base means.

31.

The method of claim 30 further comprising slip fitting one or more additional pole sections sequentially beginning with the first pole section.

32.

The method of claim 30 wherein the base means is moved to the excavated hole by fixing a carrying strap through a bore in the center of the base means and by a crane means lifting the base means and placing it into the excavated hole.

33.

The method of claim 30 wherein the step of moving the base means into the excavated hole comprises:

forming a bore laterally through the base means generally perpendicular to the longitudinal axis of the base means;

slidably inserting an elongated bar through the bore, the bar having opposite ends which extend outwardly on each side of the base means;

grasping each end of the bar with a lifting and motive means; and

moving the base means over and into the excavated hole.

34.

The method of claim 33 wherein the bar allows the base means to swing freely in a first plane so that the gravitational pull on the base means plumbs the base means in that plane.

35.

The method of claim 34 further comprising first and second vertical jack means each having a base which can be placed on the ground, and an upper end associated with the bar to raise and lower one side of the bar to level or plumb the base means.

36.

The method of claim 35 wherein the jack means comprises an upper end having a v shape to receive the bar.

37.

The method of claim 35 wherein the jack means includes a vertically extending elongated member which slidably passes through a vertical bore in the bar means.

38.

The method of claim 34 further comprising a second bar means extending through a bore laterally through and generally perpendicular to the longitudinal axis of the base means, the

second bar means being adaptable to receive a jack means at opposite ends to fix the base means in a plumb position.

39.

The method of claim 34 further comprising a second bar means extending through a bore generally perpendicular to the longitudinal axis of and laterally through the base means, and generally perpendicular to the first bore, the first and second bores having an intersection location whereby the diameter of the first and second bores overlap at least in part so that the second bar abuts against the first bar to provide a balance point for the base means, the balance point containing all the weight of the base means at generally a small abutment of curved surfaces of the first and second bars to provide a self plumbing device.

40.

The method of claim 34 further comprising a sleeve having an inside diameter greater than the outside diameter of the first bar and surrounding the first bar, the sleeve including generally at its mid-section generally coincident with the longitudinal axis of the base means one or more balance nodes extending inwardly towards the longitudinal axis of the sleeve and onto which the first bar would abut, the balance nodes providing generally most of the gravitational pull for the base means at that general location to provide a self plumbing means for the base means.

41.

The method of claim 30 wherein the base means is plumbed by utilizing a level means.

42.

The method of claim 41 wherein the level means comprises an elongated level having first and second ends, one of said first and second ends having attached to it an extension member, the extension member having a transfer link from the

level means selected so that the angle formed between a line from the other of said ends of the level to the outer extended end of the extension member, in comparison with the edge of the level would be equal to the angle formed by a taper in the upper section of the base means.

43.

A method of rigidly suspending one or more members in an elevated position comprising:

determining the needs of a pole structure by considering one or more of the set comprised of height, weight and distribution of the one or more members which are to be suspended, when load;

determining the needs of a base means to support the pole by considering one or more of the following set comprised of the set regarding determining the needs of the pole, type of ground, type of mounting in the ground, and stress at or around the base means;

selecting a configuration for the pole means from one or more of the set comprised of number of sections of the pole means, shape of each section, length of each section, largest diameter of each section, sheet thickness and gauge of each section, steel tensile strength of each section, type of steel of each section;

selecting a configuration of the base means by considering one or more of the set comprising the set used in selecting the configuration of the pole means, diameter of the base means, amount of the base means covered by the pole means when connected, type of concrete used in the base means, treatment of the concrete used in the base means, and rebar structure used in the base means, wall thickness, stress, type of steel, joint strength, shipping considerations, ground type, and length of taper; and

constructing a pole means of desired configuration of the base and pole section or sections according to the selected determinations.

44.

A system for rigidly elevating one or more structures at a site comprising:

one or more base means for positioning in desired predetermined locations in the ground at the site;

each base means having an upper section which extends above ground when the base means is mounted in the ground;

one or more pole section means for each base means for suspending the elevated structure to a desired height, each pole section means being hollow and having upper and lower ends, each being slip fittable over one of the set of upper section of the base means or upper end of the pole structure means;

means for locking each pole section into position; and

means for raising the locked pole sections with the structure attached into vertical position.

45.

The system of claim 44 wherein the means for locking includes a substance coated on at least one of the upper sections of the base means and the lower end interior of the pole section means.

46.

The system of claim 45 wherein the substance has at least one or more properties selected from the set comprising adhesive, lubricant, and sealant properties.